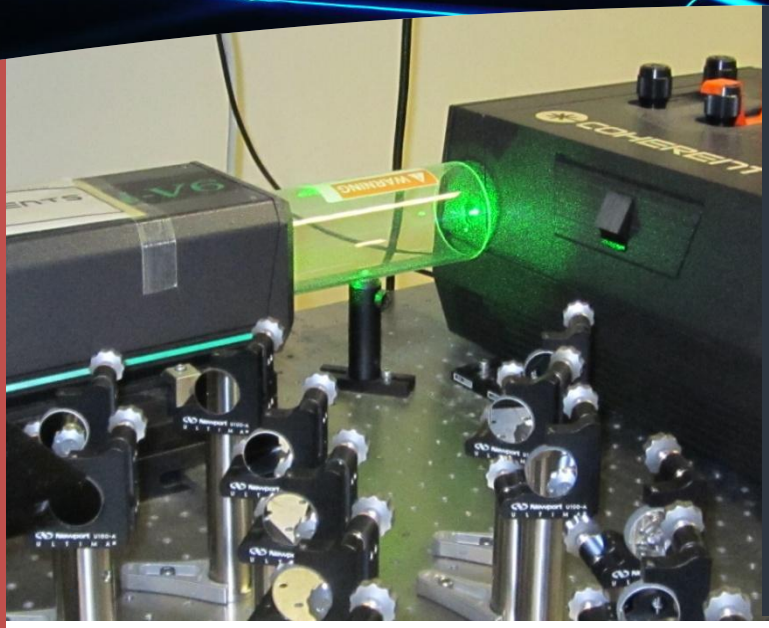
Monthly Newsletter on Laser Safety

The Remaining Eye

Sept 2012 Issue



Ken Barat's Retirement

My last day at LBNL will be Friday Sept 28. So we have

24 Days, if I was counting.

SPIE Global Salary Survey

I have a copy of the survey results. If you would like a copy, please email me.

ANSI Meeting

Spet 14, 9-2 PM in building 15 room 253 will be a meeting of the ANSI Z136.8 committee and interested stakeholders. This will be the first meeting of the committee since the publicationof the Z136.8 Standard, Laser Safety in the Research , Development and Testing Envirnoment.

You all are welcome to attend .

Laser Vendor Fair

Sept 19 cafeteria, mark the date, 3-5 PM

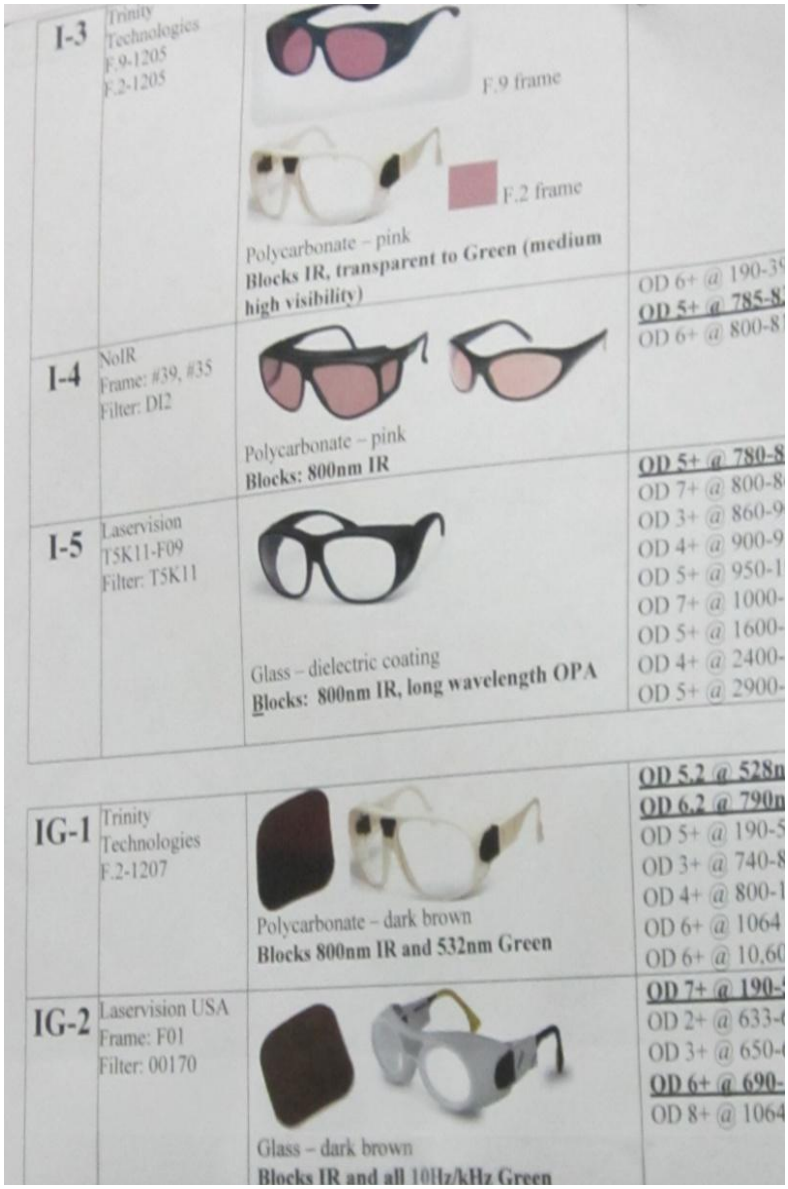
This year's Laser Vendor Fair will be the last I set up, so I have tried to make it the best I can, Food quality is up and the vendor should provide some interesting contacts for you. All we need is you, invite friends from campus.Here is the list of expected exhibitors, waiting to hear from a few more:

Coherent	Opto Sigma
Spectra Physics	Idex corp
Newport	Crystal laser
Honeywell	Quantum Lasers
Thor Labs	Keyence
Gentec	Power Technologies
Siskiyou	Pembroke Instruments
Ophir	Light House Photonics
Kentek	DPSS Lasers
80/20 Frame	NOIR (may have conflict)
KMLab	Calmar Laser

If you can think of others to invite, please get back to me as soon as you can.

Laser Eyewear Issues

The most important question about laser protective eyewear is does it protect me, and can I see through it? From a compliance perspective an important question: " is it labeled properly?". Meaning does it show the wavelengths it gives protection for and the Optical Density (OD). Presently there are no rules on where this information is indicated and how large the font has to be, on the eyewear. For many pairs it is a challenge to find or read what is there. In addition the labeling can wear off. Once that happens the eyewear is no longer compliant. There is nothing wrong with the user relabeling the eyewear. But a few of our fellow LBNL laser uses have a better solution. Where their eyewear is displayed they have a poster showing the eyewear, listing the wavelengths and OD. Going one step further they place a code on the eyewear, either a number or IR for infrared, etc this provides simple identification and is easy to re-label if necessary. An idea worth considering for your lab.



Laser technican

Some of you know I have been trying to get the Lab to create a Laser Technician pool, similar to Electrical or Mechanical Techs. While this will not happen during my tenure the idea does have considerable merit and interest. As with all things the critical item is not the need or merit but can the cost be covered?

I think the answer is YES, if we expand the role to assistance on laser lab layout, trouble shooting and performing some preventative maintenance for some system. Our two existing laser techs (Steve Fournier & Art Magana) part of the LOASIS Group have already made a major difference to several groups. But we need at least 2 more, who official work for all & not just as a favor assist users. Depending on SLAC is not a viable alternative.

Management and your Grass Roots support need to keep the dream alive.

IR Card

IR Sensor Cards common to many laser users work on a principle known as “Electron Trapping” where phosphor-based compounds are employed to absorb and "trap" incoming light energy from a short wavelength, and release that stored light in the form of visible light upon stimulation from a longer IR wavelength. The visible result is a localized glow, which is relative in intensity to the amount of stored light and IR power levels exciting the active area. The most common IR card is the laminated card. Here the phosphor layer is laminated between clear plastic, while protecting the phosphor**, it does provide a reflective surface (which can be a hazard to users). To avoid reflections to you, use the card so the beam is reflected downward not upward. There is also the rough surface card, no lamination**. **Last we have the IR sensor material on an adhesive backing, so it can be applied to customized uses**. One might be to place around the perimeter of an iris or at the end of a wand. A point of interest UV sensor cards also can be purchased, through most of you use business cards. I do have adhesive orange paper that fluorescence well at 800 nm, free, just send me an email.

Laser Pointers & the Coast Guard

Washington (CNN) -- A U.S. Coast Guard chopper responding to a possibly distressed boater off the South Carolina coast was forced to make an emergency landing when the pilot was temporarily blinded by a laser, the service said. The scare on Wednesday near Garden City Beach was the third time in as many weeks that Coast Guard pilots in that area, called the Grand Strand, have reported being disabled by sharp laser light."We've been very fortunate that the green laser incidents haven't yet resulted in tragedy," Coast Guard Cmdr. Gregory Fuller of Air Station Savannah said in a statement. In the latest incident, the chopper responded to reports of orange flares offshore. Following the emergency landing, another crew took over and continued the search. No distressed boater or any evidence of flares were found, the Coast Guard said. The Coast Guard is working with police to try to find out who is responsible. The pilot in this case was grounded for 24 hours before being cleared to fly again.

Coast Guard officials have deemed the Grand Strand area of the South Carolina coast where pilots have reported lasers as very high risk, and now require crews to consider the possibility of a laser scenario before responding to a distress call."Every time we send our aircrews to the Grand Strand, we're telling them to fly into the equivalent of a storm, where it's almost guaranteed they'll be hit," Fuller said. "We're simply asking the public to stop putting Coast Guard men and women in senseless and unnecessary danger.""Shining a laser at an airplane is not a laughing matter. It's dangerous for both pilots and passengers, and we will not tolerate it," Transportation Secretary Ray LaHood said in May.

Winner of last month's Laser Movie title quiz is

The Ajo-Franklin Group

Scored 100% Congratulations

As a reminder you have not yet claimed your prize

LSO WORKSHOP

Sept 11-13 will be the 8th Annual LSO Workshop, sponsored by the DOE LSO Working Group. This is the premier laser safety meeting of each year. This year it will be hosted by SLAC, LBNL hosted in 2010. I am proud to have been the Director and driver of this workshop for the seven previous years. With this year's session, it has now been officially turned over to the DOE LSO Group. The workshop is open to all and is a mixture of technology updates and presentation on real world laser safety issues. This year's attendance will be near 150

Ken Barat : A few parting words

I must say that being the Berkeley Lab Laser Safety Officer has been the luckiest and best time of my professional life. Whether we have known each other since the beginning (1992) or only this last year, I want to say thank you. All my professional success and enrichment traces back to my interactions with all of you. I count all of you as my friends. I am only retiring from LBNL, not beaming to another dimension, so please contact me if you need advice or just miss my sense of humor. As of Oct I will be using lasersafetysolution@gmail.com and you can also find me on Linkendin.

Fun Fact: Netflix video streams make up one-quarter of all Internet data

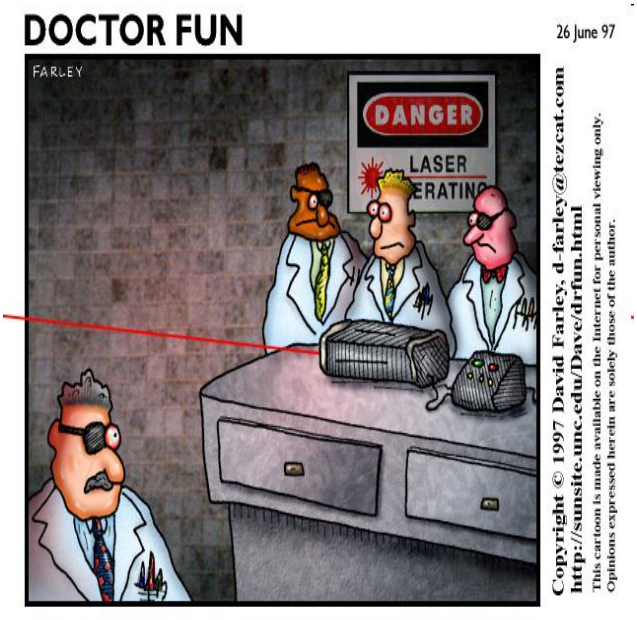
New Logo, new Division name you will be seeing

BERKELEY LAB

Environment / Health / Safety / Security
DIVISION

Ken's 3 favorite cartoons, from:

Another afterhours game of laser tag at the Lawrence Livermore Laboratory.



Peer pressure in the laser lab

Science Humor

Jupiter Scientific is pleased to report that physicists have embarked on their own product safety campaign, recommending that manufacturers provide consumers with all of the following labels:
WARNING: Due to its heavy mass, this product warps the space surrounding it. No health hazards are yet known to be associated with effect.
HEALTH WARNING: This product (and every product of the Manufacturer) emits low-level nuclear

radiation.
NOTE: A subatomic "glue" holds the fundamental constituents of this product together. Since the exact nature of this glue is not yet fully understood, its adhesive power cannot be guaranteed. To date, no known malfunction of the product has resulted from glue failure.
DISCLAIMER: Manufacturer is not responsible for loss should this product disappear into a wormhole.
NOTE: Despite its appearance, this product is more than 99.99% empty space.
HANDLE WITH CARE: This product contains countless, minute, electrically charged particles moving at extremely high speeds.
EXTREME CAUTION: This product has an energy-equivalent that, if exploded, could destroy a small town. Under no circumstance shall a User perform a mass-energy transformation on any of the contents in this package. In case of misuse, liability shall rest entirely with the User.
IMPORTANT: This product is composed of 100% matter: It is the responsibility of the User to make sure that it does not come in contact with antimatter. Under no circumstances will the Manufacturer be liable for User mishandling in this regard.
QUALITY STANDARD: The electrons, protons and neutrons are guaranteed to be of same quality as those used in other products of the Manufacturer.
AS REQUIRED BY LAW, we must inform you that any use of this product increases the amount of disorder in the universe. As of the date shipped, Congress has not passed any bills assigning a tax on disorder pollution.

Q: What is the name of the molecule CH_2O? A: Seawater

Cost of Brains, no, not a Zombie market joke

A man, complaining of headaches, entered a hospital for diagnostic tests. A doctor examined the results for a brain scan and told the patient, "I have bad news and good news for you. The bad news is that you have a serious brain disease and will die without treatment. The good news is that this hospital has developed a new procedure for brain transplants and due to a car accident this morning two 'fresh' brains are available: one is from a taxi driver and the other is from a scientist. The brain of the taxi driver costs $225,000, while that of the scientist is only $29.95." Puzzled, the patient asked, "Why is the scientist's brain was so much cheaper?" The doctor replied, "It's used."